

Message Text

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TAGS: TGEN, US, UR

SUBJECT: US-USSR S&T AGREEMENT: ELECTROMETALLURGY:
ELECTRON-BEAM EVAPORATION (01.0303)

REF: (A) MOSCOW 13966, (B) MOSCOW 18004, (C) STATE 196468

1. REQUEST EMBASSY TRANSMIT LETTER FROM KAUFMAN TO GLEBOV
WITH COPIES TO ANTONOV, MOVCHAN AND INASHVILI.

2. 01.0303 - AUGUST 10, 1978

MR. S. V. GLEBOV
STATE COMMITTEE OF USSR
COUNCIL OF MINISTERS FOR SCIENCE AND TECHNOLOGY
11 GORKY STREET
MOSCOW, USSR

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DEAR SERGEI:

I HOPE THAT YOU ARE WELL AND BUSY WITH YOUR WORK. I AM
WRITING YOU AFTER CONSULTATION WITH BUNSHAH AND TIPNIS AND

IN RESPONSE TO YOUR LETTER DATED 8 JUNE 1978. COPIES OF
THIS LETTER REACHED ME 14 JULY 1978.

AS INDICATED IN PROFESSOR BUNSHAH'S LETTER OF JULY 31, 1978 TO YOU, WE HOPE TO VISIT MOSCOW AND KIEV DURING 3-10 SEPTEMBER 1978 SO THAT WE CAN DISCUSS THE PROPOSALS IN YOUR LETTER WITH YOU AND THE GROUPS AT PATON AND VNII. WE WOULD APPRECIATE AN IMMEDIATE RESPONSE FROM YOU CONCERNING THE ACCEPTABILITY OF THE PROPOSED VISIT IN THAT PARTICULAR TIME PERIOD.

WE HAVE DEVELOPED A LIST OF RESPONSES TO YOUR PROPOSALS WHICH WE ARE PRESENTING HERE IN WRITING SO THAT YOU AND VNII CAN STUDY THEM IN ADVANCE OF OUR VISIT.

I WOULD LIKE TO STATE IN ADVANCE THAT ALTHOUGH WE ARE IN GENERAL AGREEMENT WITH YOUR PROPOSALS OUR PROGRAM FUNDING WILL NOT PERMIT THE PREPARATION AND TESTING OF SUCH LARGE NUMBERS OF TOOLS AS SUGGESTED IN YOUR LETTER OF 8 JUNE 1978. THEREFORE WE WILL HAVE TO REDUCE THE NUMBERS OF TOOLS TO BE SUPPLIED AND TESTED.

A SECOND POINT IS THAT WE HAVE BEEN WORKING ACTIVELY ON THE PROGRAM SINCE OCTOBER 1977. DURING THIS TIME THE USSR TEAM HAS NOT BEEN ABLE TO PARTICIPATE DUE TO ADMINISTRATIVE PROBLEMS. AS A CONSEQUENCE WE HAVE MADE A NUMBER OF DECISIONS WITH RESPECT TO THE MATRIX COMPOSITION OF THE HIGH SPEED STEEL TOOLS TO BE USED IN THIS PROGRAM AND THE

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DESIGN OF THESE TOOLS. WE HAVE MANUFACTURED THE TOOLS AND WILL BRING THEM ON OUR VISIT. SINCE THE COSTS OF MAKING THE TOOL; AS BEEN CONSIDERABLE WE CANNOT CONSIDER CHANGING THE DESIGN OR THE COMPOSITION NOW. HOWEVER I AM SURE THAT OUR VNII CO-WORKERS WILL APPROVE OF OUR SELECTION. WE HAVE CHOSEN AISI M42 STEEL WHICH HAS A COMPOSITION OF 1.10 CARBON, 0.25 MANGANESE, 0.35 SILICON, 9.50 MOLYBDENUM, 1.50 TUNGSTEN, 3.75 CHROMIUM, 1.20 VANADIUM, 8.0 COBALT, AND 74.35 IRON. THIS STEEL IS HARDENED AT 2150-2175 DEGREES F, OIL QUENCHED AND TRIPLE TEMPERED TO 950 DEGREES F IN ORDER TO ACHIEVE HARDNESSES OF 66-67 RC. I WILL BRING 150 TIPS OF THIS STEEL TO THE USSR ON 3 SEPTEMBER 1978.

FINALLY, IN VIEW OF THE LIMITED FUNDING AVAILABLE WE HAVE DECIDED TO EVALUATE M42 CUT-OFF TOOLS IN THE FINAL PHASE OF THE PROGRAM. THE EVALUATION OF CUT-OFF TOOLS IS SIMPLER AND LESS EXPENSIVE THAN THE EVALUATION OF DRILLS OR BROACHES. THE CUT-OFF TOOLS WILL BE MADE OF THE M42 STEEL HARDENED TO RC 66-67. THE DESIGN OF METCUT SELECTED THE CUT-OFF TOOL DESIGN AND I WILL BRING A SAMPLE OF THE

TOOL TO GIVE YOU ON SEPTEMBER 3, 1978. WE ARE MANUFAC-
TURING 60 CUT-OFF TOOLS OF THE M42 STEEL FOR DELIVERY TO
VNII IN JANUARY 1979.

NOW I WOULD LIKE TO RESPOND TO YOUR PROPOSAL ON A POINT BY
POINT BASIS. WE PROPOSE THE FOLLOWING:

1. 3 SEPTEMBER 1978:

1.1 U.S. (MANLABS) WILL BRING TO MOSCOW 80 TIPS OF SNG
432-K-21 FOR COATING BY USSR(VNII). THESE TIPS WILL BE
COATED WITH T;E CARBONITRIDE COATING BY VNII. THE CARBO-
NITRIDED COATING (TIC-TIN) (VNII) ON K21 WILL B- TESTED IN
THE U.S. AND T;E USSR. VNII WILL SEND 30 OF THESE (TIC-
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TIN) (VNII)/K21 TO MANLABS ON 15 OCTOBER 1978.

1.2 U.S. (MANLABS) WILL BRING TO ;OSCOW 30 COATED TIPS OF
HFC ON K21 FOR TESTING AT VNII.

1.3 U.S. (MANLABS) WILL BRING TO MOSCOW 20 COATED TIPS OF
HFC ON MODIFIED K21 FOR TESTING AT VNII.

1.4 MANLABS WILL BRING TO MOSCOW 150 TIPS OF M42 HIGH
SPEED STEEL. VNII WILL TEST 3U OF THE M42 TIPS WITHOUT
COATING. VNII WILL COAT 60 WITH TIC (VNII-TIC/M42) AND 60
WITH TIN (VNII-TIN/M42) FOR TESTING IN THE U.S. AND USSR.
THE USSR (VNII) WILL SEND THE COATED M42 TIPS TO MANLABS
BY 1 MARCH 1979. VNII WILL SEND MANLABS 25 (VNII-TIN)/M42
TIPS AND 25 (VNII-TIC)/M42 TIPS.

1.5 MANLABS DOES NOT HAVE ANY FUNDS AVAILABLE TO COAT AND
TEST THE TIPS OF GRADE VK6 AND TT10K8B. IT IS OUR UNDER-
STANDING THAT VK6 IS WC 6 CO AND TT10K8B IS 82 WC, 8
CO AND 10 (TAC TIC). THUS TT10K8B IS CLOSE IN COMPOSITION
TO THE K21 TIP WE HAVE EVALUATED IN THE PROGRAM. IT MAY
BE POSSIBLE TO EVALUATE ONE TIP COMPOSITION AND ONE
COATING. WE THEREFORE PROPOSE THAT VNII SEND MANLABS 2,
TIPS OF SNG432-TT10K8B; 20 TIPS OF VNII-TIC/TT10K8B-SNG432
AND 20 TIPS OF VNII-(TIN-TIC)/TT10K8B-SNG432. THESE TIPS
WILL BE SENT TO MANLABS ON 15 OCTOBER 1978.

2. 15 OCTOBER 1978:

2.1 MANLABS WILL SEND VNII 25 TIPS OF HFN/K21 - SNG 432
FOR TESTING.

2.2 VNII WILL SEND MANLABS 20 TIPS OF TT10K8B-SNG 432, 20
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TIPS OF (VNII) (TIC)/TT10K8-SNG 432 AND 20 TIPS OF VNII
(TIC TIC)/TT10K8-SNG 432 FOR TESTING.

3. 1 JANUARY 1979:

3.1 MANLABS WILL SEND 60 CUT-OFF TOOLS OF M42 TO VNII FOR
TESTING AND COATING IN PHASE II OF THE PROGRAM.

4. 1 MARCH 1979:

4.1 MANLABS WILL SEND VNII 30 TIPS OF UCLA-TIC/M42 AND 30
TIPS OF UCLA-HFN/M42 FOR TESTING.

4.2 VNII WILL SEND 25 TIPS OF (VNII-TIN)/M42 AND 25 TIPS
OF (VNII-TIC)/M42 TIPS FOR TESTING.

4.3 DATA ON THE TESTS OF CARBIDE TOOLS AND COATED CARBIDE
TOOLS WILL BE EXCHANGED.

5. 30 JULY 1979:

5.1 MEETING IN U.S. TO COMPARE RESULTS OF TESTS ON
M42 TOOLS AND COATED M42 TOOLS.

5.2 SELECTION OF ONE U.S. COATING AND ONE USSR COATING FOR
APPLICATION TO THE CUT-OFF TOOLS.

6. 1 OCTOBER 1979:

6.1 U.S. (MANLABS) WILL SEND VNII, 25 COATED M42 CUT-OFF
TOOLS FOR TESTING.

6.2 USSR (VNII) WILL SEND MANLABS, 20 COATED M42 CUT-OFF
TOOLS FOR TESTING.

7. 1 JANUARY 1980:

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7.1 RESULTS OF THE TESTS ON THE CUT-OFF TOOLS WILL BE
EXCHANGED AND A FINAL REPORT ON THE PROJECT WILL BE PRE-
PARED. THE FINAL REPORT WILL BE COMPLETED BY 1 JUNE 1980.

I LOOK FORWARD TO SEEING YOU IN MOSCOW. I HOPE THAT WE
HAVE A GOOD MEETING WITH THE VNII WORKERS AND VNII'S COATING

LABORATORY FOR CUTTING TOOLS ON SEPTEMBER 6 AND 7. I WOULD LIKE TO VISIT BAIKOV INSTITUTE ON 8 SEPTEMBER 1978.

OUR DELEGATION WILL CONSIST OF R. BUNSHAH; L. BIANCHI; H. SMITH AND MYSELF. WE ARE ALSO PLANNING TO ;AVE WALTER STEBLEZ ACCOMPANY US AS INTERPRETER. HE IS EXPECTED TO BE IN THE SOVIET UNION WITH A DELEGATION ON THE HOUSING AGREEMENT WH;ICH ARRIVES IN MOSCOW AUGUST 26, 1978. WE REQUEST CONFIRMATION FOR HAVING HIM REMAIN WITH US AS PART OF OUR

GROUP FROM SEPTEMBER 3 TO SEPTEMBER 8 WHEN HE IS EXPECTED TO DEPART THE SOVIET UNION. SINCE HIS CURRENT VISA WILL EXPIRE SEPTEMBER 3 WE WOULD LIKE TO HAVE IT EXTENDED AFTER HIS ARRIVAL WITH THE HOUSING AGREEMENT DELEGATION FOR THE ADDITIONAL 5 DAYS.

WE STILL EXPECT TO ARRIVE IN MOSCOW ON SUNDAY SEPTEMBER 3 ON JAL-440 AND WILL DEPART MOSCOW SEPTEMBER 10, 1978 ON PA-67.

WE UNDERSTAND THAT THE DATES WE SUGGESTED FOR VISITING PARTICULAR INSTITUTES MAY NOT COINCIDE WITH THE SCHEDULE YOU WILL EVENTUALLY DEVELOP FOR US. AS USUALLY IT WOULD BE MOST HELPFUL FOR US TO RECEIVE OUR ACTUAL ITINERARY FROM YOU BEFORE OUR DEPARTURE FOR THE SOVIET UNION.

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BEST REGARDS,

LARRY KAUFMAN
VICE PRESIDENT AND DIRECTOR OF RESEARCH

CC:
DR. ANTONOV
DR. MOVCHAN
MR. INASHVILI.

3. FYI. WOULD APPRECIATE SCIOFF CONFIRMING THAT SOVIETS WILL RECEIVE USDEL ON SEPTEMBER 3 FOR PROGRAM OF VISITS IN REF C. BUNSHAH STRESSES THE IMPORTANCE OF THE GROUP'S VISIT TO THE COATING LABORATORY FOR CUTTING TOOLS AT VNII.

4. WOULD ALSO APPRECIATE CONFIRMATION THAT VISA FOR STEBLEZ, WHO IS EXPECTED TO ARRIVE MOSCOW AUGUST 26 WITH MR. DONALD WEINROTH OF NAS FOR DISCUSSIONS ON HOUSING AGREEMENT SEMINARS 10.02 AND 10.03 (STATE 197284), CAN BE EXTENDED AFTER HIS ARRIVAL TO COVER PERIOD SEPTEMBER 3-8. END FYI. CHRISTOPHER

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